# The Mystery at the Grand Portrait Gallery

The pupils of Masters Academy are going on a school trip to the Grand Portrait Gallery. They have been studying famous artists and are excited at the thought of seeing their favourite and most famous portraits at the gallery.

When they arrive, they are led into the reception area where they are counted twice for good measure and then told which groups they are in.

However, disaster has struck! Some budding artist has sneaked away from the group and, with their felt tip pen, drawn moustaches on all the portraits!

Your task is to use the evidence and the descriptions of the suspects to identify the mystery moustache meddler!

# The Mystery at the Grand Portrait Gallery

Description of Suspects

| Name | Male/Female | Height | Group Name | Type of Chocolate in Lunchbox | Shoe Size |
|---|---|---|---|---|---|
| Alesso | m | tall | Klee | Caramel Bite | 5 |
| Bridget | f | short | Mondrian | Dippy Duo | 5 |
| Claude | m | tall | Klee | Caramel Bite | 3 |
| Dora | f | tall | Cézanne | Dippy Duo | 5 |
| Eugene | m | tall | Klee | Dippy Duo | 3 |
| Frieda | f | short | Mondrian | Nutty Choc | 3 |
| Georgia | f | tall | Klee | Caramel Bite | 4 |
| Hans | m | short | Cézanne | Nutty Choc | 3 |
| Ingrid | f | tall | Klee | Caramel Bite | 5 |
| Jean | m | tall | Mondrian | Dippy Duo | 3 |
| Kiki | f | tall | Cézanne | Caramel Bite | 5 |
| Louis | m | short | Mondrian | Dippy Duo | 4 |
| Maya | f | tall | Monet | Dippy Duo | 3 |
| Nicolas | m | tall | Klee | Caramel Bite | 5 |
| Orlan | m | tall | Klee | Dippy Duo | 4 |
| Pierre | m | short | Mondrian | Dippy Duo | 4 |
| Raphael | m | tall | Klee | Caramel Bite | 4 |
| Sisco | m | tall | Monet | Nutty Choc | 4 |
| Tomas | m | tall | Klee | Choco Glory | 4 |
| Veronique | f | short | Monet | Caramel Bite | 5 |

# The Mystery at the Grand Portrait Gallery

## Clue 1: Forwards and Backwards

Add the missing numbers to complete the number patterns.

Count on in multiples of 2.

( 10 ) ( ) ( ) ( ) ( )

Count on in multiples of 5.

( 15 ) ( ) ( ) ( ) ( )

Count on in multiples of 10.

( 20 ) ( ) ( ) ( ) ( )

Count back in multiples of 2.

( 24 ) ( ) ( ) ( ) ( )

Count back in multiples of 5.

( 30 ) ( ) ( ) ( ) ( )

Count back in multiples of 10.

( 60 ) ( ) ( ) ( ) ( )

# The Mystery at the Grand Portrait Gallery

Look at the last number in each row. Find the numbers in the table below and colour them in.

Rearrange the words into a sentence to solve the first clue.

| 18<br>is | 60<br>doodler | 35<br>the |
|---|---|---|
| 50<br>short | 20<br>tall | 14<br>female |
| 10<br>mysterious | 16<br>moustache | 15<br>chocolate |

Answer to clue 1: _____

# The Mystery at the Grand Portrait Gallery

## Clue 2: Right or Wrong

Work out if these statements are right or wrong.

Then count the number of right answers and the number of wrong answers.

|  | Right | Wrong |
|---|---|---|
| A rectangle has two long sides the same length and two shorter sides the same length. |  |  |
| These coins add up to £1.16.  |  |  |
| 140cm is the same as 1m 40cm. |  |  |
| There are 15 days in two weeks. |  |  |
| A cylinder has two squares at each end. |  |  |
| 2 + 2 + 2 + 2 is equal to 4 × 2. |  |  |
| 42 − 13 = 30 |  |  |

If there are more right answers, the moustache doodler is female.

If there are more wrong answers, the moustache doodler is male.
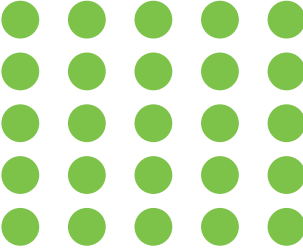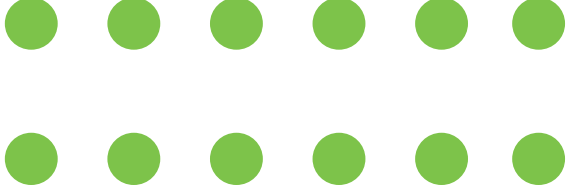
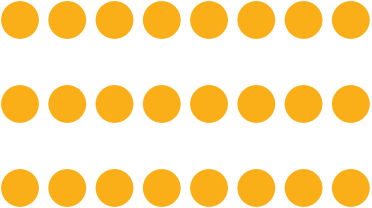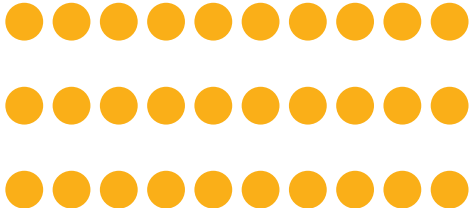Circle one:        male        female
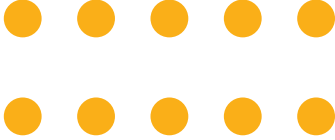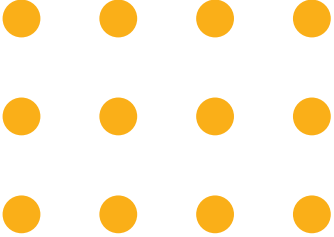
# The Mystery at the Grand Portrait Gallery

## Clue 3: Arrays of Arrays!

Here are some arrays.

Use the table below to find which calculation they show.

Rearrange the words to make a sentence to solve the third clue.

| 1.  | 4.  |
|---|---|
| 2.  | 5.  |
| 3.  | 6.  |

| 8 × 3 = 24 is | 10 × 3 = 30 Klee | 4 × 5 = 20 Cézanne | 4 × 3 = 12 in |
|---|---|---|---|
| 10 × 5 = 50 Choco Glory | 8 × 2 = 16 Monet | 6 × 2 = 12 vandal | 2 × 7 = 14 chocolate |
| 5 × 2 = 10 the | 2 × 3 = 6 found | 5 × 5 = 25 group | 10 × 2 = 20 wrapper |

Answer to clue 3: _____

# The Mystery at the Grand Portrait Gallery

## Clue 4: Fraction of a Whole

Match up the fraction statements with the correct answers. Rearrange the words to make a sentence to solve the fourth clue.

| | | | |
|---|---|---|---|
| $\frac{1}{2}$ of 8 | $\frac{1}{4}$ of 24 | $\frac{1}{2}$ of 10 | $\frac{1}{4}$ of 28 |
| $\frac{1}{2}$ of 6 | $\frac{1}{4}$ of 48 | $\frac{1}{2}$ of 18 | $\frac{1}{4}$ of 40 |

| | | | |
|---|---|---|---|
| 3<br>was | 0<br>shoe | 4<br>beside | 10<br>found |
| 1<br>Dippy Duo | 5<br>wrapper | 11<br>Choco Glory | 7<br>Caramel Bite |
| 6<br>the | 9<br>a | 12<br>paintings | 2<br>size |

Answer to clue 4: _____

# The Mystery at the Grand Portrait Gallery

## Clue 5: Missing Moustaches

Fill in the missing numbers.

Then, colour in the numbers you have written in the table below.

Rearrange the words to make a sentence to solve the final clue.

Be careful, sometimes you need to count forwards and sometimes backwards!

96    97    [  ]    99    [  ]    102

103    [  ]    [  ]    100    [  ]    98

88    89    [  ]    91    [  ]    93

75    74    [  ]    72    71    [  ]

| 102 the | 76 five | 101 drawing |
|---|---|---|
| 90 vandal | 73 moustache | 105 three |
| 66 behind | 100 a | 99 left |
| 98 size | 70 four | 92 footprint |

Answer to clue 5: _____

# The Mystery at the Grand Portrait Gallery

Have you solved the mystery of the moustache doodling vandal?

The mysterious moustache doodler is: _____
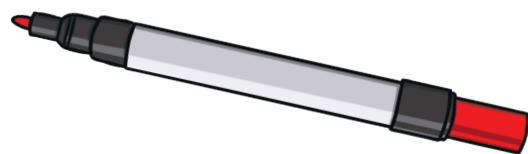
# The Mystery at the Grand Portrait Gallery
# Answers

Clue 1: Forwards and Backwards

| 18<br>is | 60<br>doodler | 35<br>the |
|---|---|---|
| 50<br>short | 20<br>tall | 14<br>female |
| 10<br>mysterious | 16<br>moustache | 15<br>chocolate |

Answer to clue 1: The mysterious moustache doodler is tall.

Clue 2: Right or Wrong

|  | Right | Wrong |
|---|---|---|
| A rectangle has two long sides the same length and two shorter sides the same length. | ✓ | |
| These coins add up to £1.16. | | ✓ |
| 140cm is the same as 1m 40cm. | ✓ | |
| There are 15 days in two weeks. | | ✓ |
| A cylinder has two squares at each end. | | ✓ |
| 2 + 2 + 2 + 2 is equal to 4 × 2. | ✓ | |
| 42 − 13 = 30 | | ✓ |

Answer to clue 2: There are more wrong answers so the culprit is male.

# The Mystery at the Grand Portrait Gallery

## Answers

Clue 3: Arrays of Arrays!

| | | | |
|---|---|---|---|
| 8 × 3 = 24<br>is | 10 × 3 = 30<br>Klee | 4 × 5 = 20<br>Cézanne | 4 × 3 = 12<br>in |
| 10 × 5 = 50<br>Choco Glory | 8 × 2 = 16<br>Monet | 6 × 2 = 12<br>vandal | 2 × 7 = 14<br>chocolate |
| 5 × 2 = 10<br>the | 2 × 3 = 6<br>found | 5 × 5 = 25<br>group | 10 × 2 = 20<br>wrapper |

Answer to clue 3: The vandal is in Klee group.

Clue 4: Fraction of a Whole

| | | | |
|---|---|---|---|
| 3<br>was | 0<br>shoe | 4<br>beside | 10<br>found |
| 1<br>Dippy Duo | 5<br>wrapper | 11<br>Choco Glory | 7<br>Caramel Bite |
| 6<br>the | 9<br>a | 12<br>paintings | 2<br>size |

Answer to clue 4: A Caramel Bite wrapper was found beside the paintings.

Clue 5: Missing Moustaches

| | | |
|---|---|---|
| 102<br>the | 76<br>five | 101<br>drawing |
| 90<br>vandal | 73<br>moustache | 105<br>three |
| 66<br>behind | 100<br>a | 99<br>left |
| 98<br>size | 70<br>four | 92<br>footprint |

Answer to clue 5: The moustache drawing vandal left a size four footprint.

**The mysterious moustache doodler is Raphael!**